

SEQUENCE LISTING

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<110> Fernandel Vernet, Corine

Shimkets, Richard A.

<120> Novel Human Proteins and Polynucleotides Encoding Them

<130> Cura-46 (15966-546)

<140> USSN 09/544,511

<141> 2000-04-06

<150> USSN 60/128,514

<151> 1999-04-09

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<170> PatentIn Ver. 2.0

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Glu Glu Met Val Ala Gln Leu Arg Asn Ser Ser Glu Leu Ala Gln Arg
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Lys Cys Glu Val Asn Leu Gln Leu Trp Met Ser Asn Lys Arg Ser Leu 85 90 95

Ser Pro Trp Gly Tyr Ser Ile Asn His Asp Pro Ser Arg Ile Pro Val 100 105 110

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Thr Met Gln Glu Asp Arg Ser Met Val Ser Val Pro Val Phe Ser Gln
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Phe

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Gln Gly Glu Ser Ala Thr Leu Arg Cys Thr Ile Asp Asn Arg Val Thr
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Arg Val Ala Trp Leu Asn Arg Ser Thr Ile Leu Tyr Ala Gly Asn Asp 65 70 75 80

Lys Trp Cys Leu Asp Pro Arg Val Val Leu Leu Ser Asn Thr Gln Thr
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Gln Tyr Ser Ile Glu Ile Gln Asn Val Asp Val Tyr Asp Glu Gly Pro 100 105 110

Tyr Thr Cys Ser Val Gln Thr Asp Asn His Pro Lys Thr Ser Arg Val 115 120 125

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- Gly Arg Pro Glu Pro Thr Val Thr Trp Arg His Ile Ser Pro Lys Ala 165 170 175
- Val Gly Phe Val Ser Glu Asp Glu Tyr Leu Glu Ile Gln Gly Ile Thr
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- Arg Glu Gln Ser Gly Asp Tyr Glu Cys Ser Ala Ser Asn Asp Val Ala 195 200 205
- Ala Pro Val Val Arg Arg Val Lys Val Thr Val Asn Tyr Pro Pro Tyr 210 215 220
- Ile Ser Glu Ala Lys Gly Thr Gly Val Pro Val Gly Gln Lys Gly Thr 225 230 235 240
- Leu Gln Cys Glu Ala Ser Ala Val Pro Ser Ala Glu Phe Gln Trp Tyr
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- Asn Arg Pro Phe Leu Ser Lys Leu Ile Phe Phe Asn Val Ser Glu His
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50 55 60

Ala Glu Glu Leu Pro Trp Glu Met Ser His Thr Glu His Gln Ser Ser 65 70 75 80

Phe Pro Thr Pro Glu Ile Pro His Ser Leu Ala Pro Gly Thr Val Ala 85 90 95

Ile Ser Lys Pro Trp Phe Pro Ala Val Ser Gln Ile Ala Arg Val Gln
100 105 110

Arg Val Asp Ile Asn Phe Cys Ser Trp Glu Asp Leu Ser Pro Ser Gly
115 120 125

Lys Ala Thr Gly Lys Ser Arg Thr His Cys Thr Val Thr Ala Val Ser 130 135 140

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Pro Phe His Val Gly Leu Phe Val Tyr Trp Pro Leu Lys 150 155 160

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<212> PRT

<213> Homo sapiens

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20 25 30

Pro Arg Trp Val Pro Lys Pro His Pro Ser Cys Ser Pro Leu Val Thr
35 40 45

Ser Ile Tyr Ala His Met Pro Leu Pro Val Leu His Leu His Val Thr
50 55 60

Ser Arg Ser Arg Gln Pro Gln Ile Tyr Leu Val Lys Thr Trp Arg Thr
65 70 75 80

Arg Ala Glu Ser Lys Arg Asp Val Asn Glu Asn Thr Asp Gln Gln Thr
85 90 95

His Gln Lys Gly Ser Val Val Ser Ala Gly Lys Gly Asp Gly Lys Gly
100 105 110

Lys Arg Ser Glu Glu Phe Cys Ala Arg Ser Ser Gly Trp Cys Leu Leu 115 120 125

Asn Cys Phe Thr His Phe Asn Pro Phe Thr Tyr Pro Gly Arg Asn Pro 130 135 140

Gly Leu Ser Pro Phe His Val Gly Leu Phe Val Tyr Trp Pro Leu Lys 145 150 155 160

<210> 11

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<220>

<221> misc_feature

<222> (1225)..(1279)

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aaacaaattt taggctgacg acttcacgga gaggcaggtt ctgctgttgc caatgaacga 180

gaad	CEEE	cta (ctago	getge	gc gg	gcate	gcaga	a gc	ccac	gtct	gtc	agct	gcc :	accti	tcgtaa	240
agca	acacg	gtt 1	tcaca	atgca	at ga	agcto	cgagt	t ggd	ctaga	aact	tca	aaac	tgt (gctca	aggttt	300
ttgt	tttg	gga a	agtta	ataaa	aa aa	agtto	gctca	a caa	aacaa	atag	tta	ttgc	ctt	ttata	atcttt	360
tato	gttag	gtc 1	tacta	agtca	ag ca	atte	tgcc	c aaa	aatg	gaaa	gcc	actc			ga agg Ly Arg	418
			gca Ala													466
			gga Gly													514
_		_	ccc Pro				_			_	_					562
			ccc Pro 55													610
			caa Gln													658
		_	gat Asp	_		_			-		-			_	_	706
			gtt Val													754
			tgc Cys		_	_	_				_			_		802
			aac Asn 135													850
			gtt													892

150 155 160

tgatecgtga agggaaacag acaggagga gtcagattge gaatacetgg ggcttectag 952
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Pro Arg Trp Val Pro Lys Pro His Pro Ser Cys Ser Pro Leu Val Thr 35 40 45

Ser Ile Tyr Ala His Met Pro Leu Pro Val Leu His Leu His Val Thr 50 55 60

Ser Arg Ser Arg Gln Pro Gln Ile Tyr Leu Val Lys Thr Trp Arg Thr 65 70 75 80

Arg Ala Glu Ser Lys Arg Asp Val Asn Glu Asn Thr Asp Gln Gln Thr
85 90 95

His Gln Lys Gly Ser Val Val Ser Ala Gly Lys Gly Asp Gly Lys Gly
100 105 110

Lys Arg Ser Glu Glu Phe Cys Ala Arg Ser Ser Gly Trp Cys Leu Leu 115 120 125

Asn Cys Phe Thr His Phe Asn Pro Phe Thr Tyr Pro Gly Arg Asn Pro

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130

80

Ser Pro Gly Asp Leu Leu Arg Phe Asp Asp Tyr Asn Ser Asp Ser Ser

85

ctg	acc	ctc	cgc	gag	ttc	tac	atg	gcc	ttc	caa	gtg	gtt	cag	ctc	agc	519
Leu	Thr	Leu	Arg	Glu	Phe	Tyr	Met	Ala	Phe	Gln	Val	Val	Gln	Leu	Ser	
			95					100					105			
ctc	gcc	CCC	gag	gac	aqq	qtc	aqt	ata	acc	aca	ata	acc	at.a	ggg	cta	567
														Gly		50,
		110			5		115	****			vai	120	val	Gry	Бец	
							113					120				
200	202	~+~	a+~													
														cca		615
ser		vaı	Leu	Thr	Cys		Val	His	Gly	Asp	Leu	Arg	Pro	Pro	Ile	
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Ile	\mathtt{Trp}	Lys	Arg	Asn	Gly	Leu	Thr	Leu	Asn	Phe	Leu	Asp	Leu	Glu	Asp	
140					145		•			150					155	
atc	aat	qac	ttt	qqa	qaq	qat	gat	tcc	cta	tac	atc	acc	aaq	gtg	acc	711
													_	Val		, 11
				160			· · · · · ·	~~_	165	- y -	110	1111	БУБ		TILL	
				100					103					170		
	ata	a aa	250	~~~	-			.								
														gag		759
Thr	ше	HIS		GIY	Asn	Tyr	Thr		His	Ala	Ser	Gly	His	Glu	Gln	
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Leu	Phe	Gln	Thr	His	Val	Leu	Gln	Val	Asn	Val	Pro	Pro	Val	Ile	Arg	
		190					195					200				
gtc	tat	cca	gag	agc	cag	gca	cag	gag	cct	gga	gtg	qca	qcc	agc	cta	855
														Ser		
	205					210				•	215					
													,			
aga	tac	cat	act	aaa	aac	att	ccc	ato	000	242	2±0	a a t	+~~	ctg		003
																903
	Суз	1112	Ата	Giu		116	PIO	mec	PIO		ire	Inr	Trp	Leu		
220					225					230					235	
														ctt		951
Asn	Gly	Val	Asp	Val	Ser	Thr	Gln	Met	Ser	Lys	Gln	Leu	Ser	Leu	Leu	
				240					245					250		
gcc	aat	ggg	agc	gaa	ctc	cac	atc	agc	agt	gtt	cgg	tat	gaa	gac	aca	999
														Asp		
		•	255					260			<u>-</u>	- 	265	P		
			-										200			
aaa	ac a	tad	200	taa	2++	acc	222	22+	~~~	~+~	~~	~	~	gaa	~~+	1045
																1047
эту	vra	270	TIIL	Cys	тте	ATG	ьуs 275	ASI	GIU	val	GТĀ		Asp	Glu	Asp	
		2. / U					115					280				

atc tcc tcg ctc ttc att gaa gac tca gct aga aag acc ctt gca aac Ile Ser Ser Leu Phe Ile Glu Asp Ser Ala Arg Lys Thr Leu Ala Asn 285 290 295	1095
atc ctg tgg cga gag gaa ggt acc aag ctt cat tgt ttt gcg tca tgc Ile Leu Trp Arg Glu Glu Gly Thr Lys Leu His Cys Phe Ala Ser Cys 300 305 310 315	1143
ctg tgatcacgtg tgtttggttc tatgatgggc cgtctttcca tgatctgcca Leu	1196
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catatgcatt gaatcaaatt taaaatgtac teetgtettt aatgagaaat ttttaaatg	gc 1316
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Gln Lys Arg Leu Leu Val Glu Ser Leu Phe Arg Asp Leu Asp Ala Asp 35 40

Gly Asn Gly His Leu Ser Ser Ser Glu Leu Ala Gln His Val Leu Lys 50 55 60

- Lys Gln Asp Leu Asp Glu Asp Leu Leu Gly Cys Ser Pro Gly Asp Leu 65 70 75 80
- Leu Arg Phe Asp Asp Tyr Asn Ser Asp Ser Ser Leu Thr Leu Arg Glu
 85 90 95
- Phe Tyr Met Ala Phe Gln Val Val Gln Leu Ser Leu Ala Pro Glu Asp 100 105 110
- Arg Val Ser Val Thr Thr Val Thr Val Gly Leu Ser Thr Val Leu Thr
 115 120 125
- Cys Ala Val His Gly Asp Leu Arg Pro Pro Ile Ile Trp Lys Arg Asn 130 135 140
- Gly Leu Thr Leu Asn Phe Leu Asp Leu Glu Asp Ile Asn Asp Phe Gly
 145 150 155 160
- Glu Asp Asp Ser Leu Tyr Ile Thr Lys Val Thr Thr Ile His Met Gly
 165 170 175
- Asn Tyr Thr Cys His Ala Ser Gly His Glu Gln Leu Phe Gln Thr His 180 185 190
- Val Leu Gln Val Asn Val Pro Pro Val Ile Arg Val Tyr Pro Glu Ser 195 200 205
- Gln Ala Gln Glu Pro Gly Val Ala Ala Ser Leu Arg Cys His Ala Glu 210 215 220
- Gly Ile Pro Met Pro Arg Ile Thr Trp Leu Lys Asn Gly Val Asp Val 225 230 235 240
- Ser Thr Gln Met Ser Lys Gln Leu Ser Leu Leu Ala Asn Gly Ser Glu 245 250 255
- Leu His Ile Ser Ser Val Arg Tyr Glu Asp Thr Gly Ala Tyr Thr Cys 260 265 270
- Ile Ala Lys Asn Glu Val Gly Val Asp Glu Asp Ile Ser Ser Leu Phe 275 280 285
- Ile Glu Asp Ser Ala Arg Lys Thr Leu Ala Asn Ile Leu Trp Arg Glu 290 295 300
- Glu Gly Thr Lys Leu His Cys Phe Ala Ser Cys Leu 305 310 315

a 60
ıc 120
ıg 180
ld 180
c 240
C 240
c 300
C 500
g 360
J
416
464
464
464
464
464 512
512
512
512
512 560
512
512 560
512 560
512 560 608
512 560
3

gag	ccc	: gaa	a tgc	: cac	gtgo	cto	g gaç	ı gca	ı tgo	agg	gccc	ago	: tac	gtg	g cct	704
Glu	Pro	Glu	ı Cys	Glr	ı Cys	Lei	ı Glu	ı Ala	Суя	arg	g Pro	Ser	Туз	va]	l Pro	
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gtg	tgo	ggc	tct:	gat	gge	ago	ı ttt	tat	αаа	aaa	e cac	. tat		t ctc	cac	752
Val	Cys	Gly	/ Ser	Asr	Glv	Arc	, Phe	Tvr	Gli	ı Agr	Hic	Cve	Lac	, CCC	His	752
100		-			105		,		OIL			Суб	, nys	, nec		
					100	,				110	,				115	
cat	act	aat	. +aa													
7~~	71-	yc.	. cgc	7 -	: ctg	gga	aag	agg	ato	acc	gtc	atc	cac	ago	aag	800
Arg	Ата	. Ala	Cys			GIY	/ Lys	Arg			· Val	Ile	His	Ser	Lys	
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Asp	Cys	Phe	Leu	Lys	Gly	Asp	Thr	Cys	Thr	Met	Ala	Gly	Туг	Ala	Arg	
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ttg	aag	aat	gtc	ctt	ctg	gca	ctc	caq	acc	cat	cta	caq	cca	ctc	caa	896
															Gln	090
	-	150					155			**** 9	пси	160	FIC	шец	GIII	
							100					100				
gaa	aaa	a a c	200	2012	000	~~~	aat	~~~	.							
			agc													944
GIU		Asp	Ser	Arg	GIII			Ala	Ser	GIn		Arg	Leu	Leu	Val	
	165					170					175					
			ttc													992
Glu	Ser	Leu	Phe	Arg	Asp	Leu	Asp	Ala	Asp	Gly	Asn	Gly	His	Leu	Ser	
180					185		-			190					195	
agc	tcc	gaa	ctg	gct	cag	cat	gtg	ctg	aag	aaq	caq	qac	cta	σat	gaa	1040
Ser	Ser	Glu	Leu	Ala	Gln	His	Val	Leu	Lvs	Lvs	Gln	Asp	Len	Asn	Glu	
				200					205	_1			2300	210	Olu	
														210		
gac	tta	ctt	ggt	tac	tca	cca	aat	ana	ata	a+ a	~~~					
Agn	T.e.11	Len	Glv	Cyc	Cor	Dro	990	yac Nan	T	T	cya	71	gae	gat -	tac	1088
Пор	LCu	LCu	Gly	Cys	per	PLO	СТУ		Leu	ьeu	Arg	Pne		Asp	Tyr	
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aac -	agt	gac	agc	tcc	ctg	acc	ctc	cgc	gag	ttc	tac	atg	gcc	ttc	caa	1136
Asn	Ser	Asp	Ser	Ser	Leu	Thr	Leu	Arg	Glu	Phe	Tyr	Met	Ala	Phe	Gln	
		230					235					240				
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Val	Val	Gln	Leu	Ser	Leu	Ala	Pro	Glu	Asp	Ara	Val	Ser	Val	Thr	Thr	
	245					250			F	3	255		• • •	1111	1111	
											رري					
ata	acc	ata	aaa	cta	200	202	at~	at~	2~~	h ~ -						
			ggg													1232
	1111	val	Gly	ьeu		mr	val	டeu	Thr		Ala	۷al	His	GLy	Asp	
260					265					270					275	

_								_					_	aac Asn 290		1280
_	_			-			_				_	_		ctg Leu		1328
														cat His		1376
					_		_			_	_			aat Asn		1424
-		_		_	•				_	_	_	_	-	cct Pro	-	1472
	_	_	_		-	_		_					_	ccc Pro 370	_	1520
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_					_			_	_				_	agt Ser	-	1616
		_	_			_			_					gaa Glu		1664
	-	_												gct Ala	_	1712
_			_			_		_		_			_	gtg Val 450		1760
	_											_		cat His		1808

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~ -	_	_		_		_						_	-	agc Ser		2144
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										gtg Val						2576
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	_		-	-	-	_		-		ctg Leu		-		_		2720
	_	_	_			_				gca Ala			-	_		2768
					_		_		_	agt Ser		_			_	2816
										ttc Phe						2864
										ata Ile 830						2912
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<213> Homo sapiens

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Val	Thr 50	Arg	Arg	Glu	Gly	Leu 55	Ser	Ser	His	Asn	Glu 60	Leu	Leu	Ala	Ser
Cys 65	Gly	Lys	Lys	Phe	Cys 70	Ser	Arg	Gly	Ser	Arg 75	Cys	Val	Leu	Ser	Arg 80
Lys	Thr	Gly	Glu	Pro 85	Glu	Cys ·	Gln	Cys	Leu 90	Glu	Ala	Cys	Arg	Pro 95	Ser
Tyr	Val	Pro	Val 100	Cys	Gly	Ser	Asp	Gly 105	Arg	Phe	Tyr	Glu	Asn 110	His	Cys
Lys	Leu	His 115	Arg	Ala	Ala	Cys	Leu 120	Leu	Gly	Lys	Arg	Ile 125	Thr	Val	Ile
His	Ser 130	Lys	Asp	Cys	Phe	Leu 135	Lys	Gly	Asp	Thr	Cys 140	Thr	Met	Ala	Gly
Tyr 145	Ala	Arg	Leu	Lys	Asn 150	Val	Leu	Leu	Ala	Leu 155	Gln	Thr	Arg	Leu	Gln 160
Pro	Leu	Gln	Glu	Gly 165	Asp	Ser	Arg	Gln	Asp 170	Pro	Ala	Ser	Gln	Lys 175	Arg
Leu	Leu	Val	Glu 180		Leu	Phe	Arg	Asp 185	Leu	Asp	Ala	Asp	Gly 190		Gly
His	Leu	Ser 195		Ser	Glu	Leu	Ala 200		His	Val	Leu	Lys 205		Gln	Asp
Leu	Asp 210		Asp	Leu	Leu	Gly 215		Ser	Pro	Gly	Asp 220		Leu	Arg	Phe
Asp 225		туг	Asn	. Ser	230		Ser	Leu	Thr	235		Glu	Phe	Tyr	Met 240
Ala	Phe	e Glr	ı Val	. Val		Leu	. Ser	Leu	Ala 250		Glu ⁄	Asp	Arg	Val 255	Ser
v-1	Thr	- ሞከነ	- Wal	Thr	- Val	Glv	Leu	Ser	Thr	· Val	Leu	Thr	Cys	: Ala	. Val

- His Gly Asp Leu Arg Pro Pro Ile Ile Trp Lys Arg Asn Gly Leu Thr
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- Leu Asn Phe Leu Asp Leu Glu Asp Ile Asn Asp Phe Gly Glu Asp Asp 290 295 300
- Ser Leu Tyr Ile Thr Lys Val Thr Thr Ile His Met Gly Asn Tyr Thr 305 310 315 320
- Cys His Ala Ser Gly His Glu Gln Leu Phe Gln Thr His Val Leu Gln 325 330 335
- Val Asn Val Pro Pro Val Ile Arg Val Tyr Pro Glu Ser Gln Ala Gln 340 345 350
- Glu Pro Gly Val Ala Ala Ser Leu Arg Cys His Ala Glu Gly Ile Pro 355 360 365
- Met Pro Arg Ile Thr Trp Leu Lys Asn Gly Val Asp Val Ser Thr Gln 370 375 380
- Met Ser Lys Gln Leu Ser Leu Leu Ala Asn Gly Ser Glu Leu His Ile 385 390 395 400
- Ser Ser Val Arg Tyr Glu Asp Thr Gly Ala Tyr Thr Cys Ile Ala Lys 405 410 415
- Asn Glu Val Gly Val Asp Glu Asp Ile Ser Ser Leu Phe Ile Glu Asp 420 425 430
- Ser Ala Arg Lys Thr Leu Ala Asn Ile Leu Trp Arg Glu Glu Gly Leu
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- Ser Val Gly Asn Met Phe Tyr Val Phe Ser Asp Asp Gly Ile Ile Val 450 455 460
- Ile His Pro Val Asp Cys Glu Ile Gln Arg His Leu Lys Pro Thr Glu 465 470 475 480
- Lys Ile Phe Met Ser Tyr Glu Glu Ile Cys Pro Gl
n Arg Glu Lys As
n 485 490 495
- Ala Thr Gln Pro Cys Gln Trp Val Ser Ala Val Asn Val Arg Asn Arg
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- Tyr Ile Tyr Val Ala Gln Pro Ala Leu Ser Arg Val Leu Val Val Asp

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Ala 545	Lys	Leu	Ser	Tyr	Asp :	Lys	Ser	His		Gln 555	Val	Trp	Val	Leu	Ser 560
Trp	Gly	Asp	Val	His 565	Lys	Ser	Arg	Pro	Ser 570	Leu	Gln	Val	Ile	Thr 575	Glu
Ala	Ser	Thr	Gly 580	Gln	Ser	Gln	His	Leu 5 85	Ile	Arg	Thr	Pro	Phe 590	Ala	Gly
Val	Asp	Asp 595	Phe	Phe	Ile	Pro	Pro 600	Thr	Asn	Leu	Ile	Ile 605	Asn	His	Ile
Arg	Phe 610	Gly	Phe	Ile	Phe	Asn 615	Lys	Ser	Asp	Pro	Ala 620	Val	His	Lys	Val
Asp 625	Leu	Glu	Thr	Met	Met 630	Pro	Leu	Lys	Thr	Ile 635	Gly	Leu	His	His	His 640
Gly	Cys	Val	Pro	Gln 645	Ala	Met	Ala	His	Thr 650	His	Leu	Gly	Gly	Tyr 655	Phe
Phe	Ile	Gln	Cys 660	Arg	Gln	Asp	Ser	Pro 665	Ala	Ser	Ala	Ala	Arg 670	Gln	Leu
Leu	Val	Asp 675	Ser	Val	Thr	Asp	Ser 680	Val	Leu	Gly	Pro	Asn 685	Gly	Asp	Val
Thr	Gly 690		Pro	His	Thr	Ser 695	Pro	Asp	Gly	Arg	Phe 700	Ile	Val	Ser	Ala
Ala 705		Asp	Ser	Pro	Trp 710	Leu	His	Val	Gln	Glu 715		Thr	Val	Arg	Gly 720
Glu	ı Ile	e Gln	Thr	Leu 725		Asp	Leu	Gln	Ile 730		Ser	Gly	Ile	Ser 735	Asp
Leu	ı Ala	Phe	Gln 740		Ser	Phe	Thr	Glu 745		Asn	Gln	Tyr	750		. Tyr
Ala	a Ala	1 Leu 755		Thr	· Glu	Pro	760		Leu	ı Ph∈	. Leu	765		ı Ser	Thr
G) s	z T.329	: Val	Glv	r Met	Leu	Lvs	Asn	Leu	Lys	Glu	ı Pro	Pro	Ala	Gl _y	/ Pro

770 775 780

Ala Gln Pro Trp Gly Gly Thr His Arg Ile Met Arg Asp Ser Gly Leu 785 790 795 800

Phe Gly Gln Tyr Leu Leu Thr Pro Ala Arg Glu Ser Leu Phe Leu Ile 805 810 815

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gag ctg ctg gcc tcc tgc ggg aag aag ttc tgc agc cga ggg agc cgg 563

Glu	Leu	Leu 35	Ala	Ser	Cys	Gly	Lys 40	Lys	Phe	Cys	Ser	Arg 45	Gly	Ser	Arg	
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-														agg Arg		659
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_		-												gac Asp		851
														tta Leu		899
														cat His 175		947
														cca Pro		995
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							Gln							gcc Ala		1091
gag	gac	aga	atc	agt.	ata	acc	aca	ata	acc	ata	qqq	ctq	aqc	aca	gtg	1139

Glu 225	Asp	Arg	Val	Ser	Val 230	Thr	Thr	Val	Thr	Val 235	Gly	Leu	Ser	Thr	Val 240	
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Leu	Thr	Cys	Ala	Val 245	His	GIA	Asp	Leu	250	Pro	Pro	IIe	11e	255	цуѕ	
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											Val					
	Gly										gag Glu 300					1331
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				Pro					Thr		ctg Leu			Gly	gtg Val	1475
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	-	355					360					365				
		Lev					Val					Thr			tac Tyr	1571
Thr	Суа				Asn	Glu					o Glu				tcg Ser	1619
385					390											1667
					Ser					Let					tgg Trp	1007
cga	a gag	g gaa	a ggo	e ete	ago	gtg	g gga	a aac	ato	g tto	c tat	gto	e tto	c tco	gac	1715

Arg	Glu	Glu	Gly 420	Leu	Ser	Val	Gly	Asn 425	Met	Phe	Tyr	Val	Phe 430	Ser	Asp	
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gtg Val	tgg Trp 530	Val	ctg Leu	agc Ser	tgg Trp	999 Gly 535	Asp	gtg Val	cac His	aag Lys	Ser 540	Arg	cca Pro	agt Ser	ctc Leu	2051
cag Gln 545	. Val	atc Ile	aca Thr	gaa Glu	gcc Ala 550	Ser	acc Thr	ggc Gly	cag Gln	ago Ser 555	Glr	cac His	ctc Leu	ato Ile	cgc Arg 560	2099
aca Thr	ccc Pro	ttt Phe	gca Ala	gga Gly 565	Val	gat Asp	gat Asp	ttc Phe	tto Phe	: Ile	ccc Pro	c cca	aca Thr	aac Asn 575	ctc Leu	2147
ato Ile	ato lle	aac Asr	cac His	s Ile	agg Arg	ttt Phe	ggc Gl _y	tto Phe	: Ile	tto Phe	e aad e Asi	aag 1 Lys	tct Ser	Asp	cct Pro	2195
gca Ala	a gto a Val	c cac L His	s Lys	g gtg s Val	g gad L Asp	ctç Lei	g gaa 1 Glu 600	ı Thi	a atg	g ato Met	g cco	c cto Lev 60!	ı Lys	g acc	c atc	2243
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				ctg Leu 645												2387
				gta Val												2435
				gct [°] Ala											gag . Glu	2483
				ggc												2531
	Gly			gac Asp							Phe					2579
				tac Tyr 725												2627
				Thr					Met						gag Glu	2675
cca Pro	ccc Pro	gca Ala 755	Gly	cca Pro	gct Ala	cag Gln	ccc Pro 760	Trp	gly ggg	ggt Gly	acc Thr	cac His 765	Arg	atc Ile	atg Met	2723
		Ser					Gln					Pro			gag Glu	2771
	Lei					ı Gly					Leu				gtg Val 800	2819
t c=	a dat	- ata		ı aaa	ı aac	racc	aca	ata	at.o	r t.arc	r ata	gat	gaq	qta	L	2864

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- Ala Cys Arg Pro Ser Tyr Val Pro Val Cys Gly Ser Asp Gly Arg Phe
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- Tyr Glu Asn His Cys Lys Leu His Arg Ala Ala Cys Leu Leu Gly Lys 85 90 95
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- Cys Thr Met Ala Gly Tyr Ala Arg Leu Lys Asn Val Leu Leu Ala Leu 115 120 125
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- Arg Glu Phe Tyr Met Ala Phe Gln Val Val Gln Leu Ser Leu Ala Pro 210 215 220
- Glu Asp Arg Val Ser Val Thr Thr Val Thr Val Gly Leu Ser Thr Val 225 230 235 240
- Leu Thr Cys Ala Val His Gly Asp Leu Arg Pro Pro Ile Ile Trp Lys

245 250	255
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- Met Gly Asn Tyr Thr Cys His Ala Ser Gly His Glu Gln Leu Phe Gln 290 295 300
- Thr His Val Leu Gln Val Asn Val Pro Pro Val Ile Arg Val Tyr Pro 305 310 315 320
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- Arg Glu Glu Gly Leu Ser Val Gly Asn Met Phe Tyr Val Phe Ser Asp 420 425 430
- Asp Gly Ile Ile Val Ile His Pro Val Asp Cys Glu Ile Gln Arg His 435 440 445
- Leu Lys Pro Thr Glu Lys Ile Phe Met Ser Tyr Glu Glu Ile Cys Pro 450 455 460
- Gln Arg Glu Lys Asn Ala Thr Gln Pro Cys Gln Trp Val Ser Ala Val
- Asn Val Arg Asn Arg Tyr Ile Tyr Val Ala Gln Pro Ala Leu Ser Arg 485 490 495
- Val Leu Val Val Asp Ile Gln Ala Gln Lys Val Leu Gln Ser Ile Gly

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Thr	Pro	Phe	Ala	Gly 565	Val	Asp	Asp	Phe	Phe 570	Ile	Pro	Pro	Thr	Asn 575	Leu
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Ala	Val	His 595	Lys	Val	Asp	Leu	Glu 600	Thr	Met	Met	Pro	Leu 605	Lys	Thr	Ile
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625	-				630		Gln			635					640
				645					650					655	Gly
			660					665					670		Arg
		675					680					685			Glu
	690)		,		695					700				Asn
705					710					715	3				720
				725	ı				730)				735	
			740)				745					750)	: Glu
Pro	Pro	Ala	a Gly	r Pro	Ala	Glr	Pro	Trp	Gly	gly,	Thr	His	s Arg	, Ile	Met

408

765

Arg Asp Ser Gly Leu Phe Gly Gln Tyr Leu Leu Thr Pro Ala Arg Glu 775 770 Ser Leu Phe Leu Ile Asn Gly Arg Gln Asn Thr Leu Arg Cys Glu Val 785 790 795 Ser Gly Ile Lys Gly Gly Thr Thr Val Val Trp Val Gly Glu Val 805 810 815 <210> 19 <211> 1208 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (124)..(1089) <400> 19 ctttgcttca gccgcagtcg ccactggctg cctgaggtgc tcttacagcc tgttccaagt 60 gtggcttaat ccgtctccac caccagatct ttctccgtgg attcctctgc taagaccgct 120 gec atg eca gtg acg gta acc ege acc acc atc aca acc acc acg acg Met Pro Val Thr Val Thr Arg Thr Thr Ile Thr Thr Thr Thr 10 1 tea tet teg gge etg ggg tee eec atg ate gtg ggg tee eet egg gee Ser Ser Ser Gly Leu Gly Ser Pro Met Ile Val Gly Ser Pro Arg Ala 30 20 ctg aca cag ccc ctg ggt ctc ctt cgc ctg ctg cag ctg gtg tct acc 264 Leu Thr Gln Pro Leu Gly Leu Leu Arg Leu Leu Gln Leu Val Ser Thr 35 tgc gtg gcc ttc tcg ctg gtg gct agc gtg ggc gcc tgg acg ggg tcc 312 Cys Val Ala Phe Ser Leu Val Ala Ser Val Gly Ala Trp Thr Gly Ser 55 . 50 atg ggc aac tgg tcc atg ttc acc tgg tgc ttc tgc ttc tcc gtg acc Met Gly Asn Trp Ser Met Phe Thr Trp Cys Phe Cys Phe Ser Val Thr 65 70

760

755

ctg atc atc ctc atc gtg gag ctg tgc ggg ctc cag gcc cgc ttc ccc

Leu Ile Ile Leu Ile Val Glu Leu Cys Gly Leu Gln Ala Arg Phe Pro

80					85					90					95	
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Leu	Ser	Trp	Arg	Asn	Phe	Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	
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ttc	tac	ctc	tca	acc	tcc	atc	atc	tac	ccc	acc	acc	tat	gtc	cag	ttc	504
Phe	Cys	Leu	Ser	Ala	Ser	Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	${\tt Gln}$	Phe	
	-		115					120					125			
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Leu	Ser	His	Gly	Arg	Ser	Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe	
		130	_				135					140				
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Ser	Cvs	Ile	Ala	Cys	Val	Ala	Tyr	Ala	Thr	Glu	Vál	Ala	Trp	Thr	Arg	
	145			-		150					155					
acc	caa	ccc	aac	gag	atc	act	qqc	tat	atg	gcc	acc	gta	ccc	aaa	ctg	648
														Gly		
160	3		-		165					170					175	
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ctg	Larg	y Ly	Len	Glu	Thr	Phe	Val	Ala	Cvs	Ile	Ile	Phe	Ala	Phe	Ile	
пеа	цъ	Val	Dou	180					185					190		
					+	~~~	636	aaa	cca	acc	cta	gag	taa	tgc	at.a	744
agc	gac	Pro	Agn	T.em	Tur	Gln	His	Gln	Pro	Ala	Leu	Glu	Trp	Cys	Val	
Ser	мор	110	195	Dea	-1-			200					205			
gcg	gtg	tac	gcc	atc	tgc	ttc	atc	cta	gcg	gco	atc	gcc	ato	ctg	ctg -	792
Ala	Val			Ile	Cys	Phe			Ala	Ala	Ile			Leu	ьeu	
		210					215					220				
aac	ctg	ggg	gag	tgc	acc	aac	gtg	cta	ccc	ato	ccc	ttc	ccc	agc	ttc	840
Asn	Leu	Gly	Glu	Cys				Leu	Pro) Ile			Pro	Ser	Phe	
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Leu	Ser	Gly	Leu	Ala	Leu	Leu	Ser	Val	Lev	ı Lev	і Туг	Ala	Thi	Ala	Leu	
240					245					250)				255	
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Val	Leu	Trp	Pro	Leu	Tyr	Glr	Phe	Asp	Gli	ı Lys	з Туг	Gly	gly,	y Glr	Pro	
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aaa		taa	r acra	oat	at=	age	. tac	ago	c ca	e ago	cat	gcc	tac	c tac	gtg	984
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Val 320	Lys	Val		gacto									×			1129
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Thi	Gln	Pro		Gly	Leu	Leu	Arg		Leu	Gln	Leu	val		Thr	Cys	
Va]	Ala 50		e Ser	Leu	Val	Ala 55		val	Gly	Ala	Trp		Gly	/ Ser	Met	
Gl ₃		ı Trj	ser Ser	. Met	Phe 70		Trp	о Сув	: Phe	Cys		e Sei	c Val	l Thr	Leu 80	
Ile	e Ile	e Lei	u Ile	e Val 85		ı Leı	ı Cys	s Gly	7 Let 90		n Ala	a Arg	g Phe	e Pro	Leu 5	,
Se	r Trj	p Ar	g Ası		e Pro	o Ile	e Thi	r Phe		а Суя	з Ту	r Ala	a Ala		ı Phe	
Су	s Le	u Se	r Ala	a Sei	: Ile	e Ile	е Ту	r Pro	Th:	r Thi	r Ty:	r Va	l Gl	n Phe	e Leu	

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Cys Ile Ala Cys Val Ala Tyr Ala Thr Glu Val Ala Trp Thr Arg Ala 145 150 155 160

Arg Pro Gly Glu Ile Thr Gly Tyr Met Ala Thr Val Pro Gly Leu Leu 165 170 175

Lys Val Leu Glu Thr Phe Val Ala Cys Ile Ile Phe Ala Phe Ile Ser 180 185 190

Asp Pro Asn Leu Tyr Gln His Gln Pro Ala Leu Glu Trp Cys Val Ala 195 200 205

Val Tyr Ala Ile Cys Phe Ile Leu Ala Ala Ile Ala Ile Leu Leu Asn 210 215 220

Leu Gly Glu Cys Thr Asn Val Leu Pro Ile Pro Phe Pro Ser Phe Leu 225 230 235 235

Ser Gly Leu Ala Leu Leu Ser Val Leu Leu Tyr Ala Thr Ala Leu Val 245 250 255

Leu Trp Pro Leu Tyr Gln Phe Asp Glu Lys Tyr Gly Gln Pro Arg

Arg Ser Arg Asp Val Ser Cys Ser Arg Ser His Ala Tyr Tyr Val Cys
275 280 285

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Leu Ala Tyr Val Ala Asp Leu Val His Ser Ala His Leu Val Phe Val 305 310 315 320

Lys Val

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gaat	cact	gg c	aatc	agac	a cc	cggg	tgtg	ctg	agct	ggc	actc	agtg	gg 9	ggcgg	ctact	480
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ant	att	ccc	+++	a a c	tat	atc	cta	cta	cta	cta	ctq	cta	cta	ctt	aca	643
His	Leu	Pro	Phe	Asp	Cys	Val	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Thr	
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tgc	tgg	ggc	aaa	gga	gcc	Cyc	Dro	y z J	Dhe	Glu	Cvs	Glv	Asn	gtg Val	Val	, , ,
Cys	тър	GIA	ьуs 55	СТУ	AIA	Cys	FIO	60	1110	0	O ₁ O	~- <i>1</i>	65			
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Leu	Arg	Thr	Asp	Glu	Arg	Asp	Val	Asn	Tyr	Trp	Thr	Ser	Arg	Tyr	$\mathtt{Trp}$	
		70					75					80				
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cta	aat	ggg	gat	Dhe	ara	Lwe	gga	yau Asn	Val	Ser	Leu	Thr	$I1\epsilon$	a gag e Glu	Asn	
ьeu	85	сту	wah	FIIG	A. A	90	~ <b>-</b> y				95					

gtg act cta gca gac agt ggg atc tac tgc tgc cgg atc caa atc cca 931
Val Thr Leu Ala Asp Ser Gly Ile Tyr Cys Cys Arg Ile Gln Ile Pro
100 105 110 115

ggc ata atg aat gat gaa aaa ttt aac ctg aag ttg gtc atc aaa cca 979
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120 125 130

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Val Pro Val Cys Trp Gly Lys Gly Ala Cys Pro Val Phe Glu Cys Gly 50 55 60

Asn Val Val Leu Arg Thr Asp Glu Arg Asp Val Asn Tyr Trp Thr Ser

Arg Tyr Trp Leu Asn Gly Asp Phe Arg Lys Gly Asp Val Ser Leu Thr

Ile Glu Asn Val Thr Leu Ala Asp Ser Gly Ile Tyr Cys Cys Arg Ile 100 105 110

Gln Ile Pro Gly Ile Met Asn Asp Glu Lys Phe Asn Leu Lys Leu Val

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Ile Lys Pro Gly Glu Trp Thr Phe Ala Cys His Leu Tyr Glu 130 135 140

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getetggeag gaacgeeece eegggeaatg eagagteete etecaggagg eaettagtgt 180
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cageececaa etg atg gae ata aag get gte tee eea tee eet get 529

cagococcaa ctg atg gac ata aag got gto too coa toa tot cot got 529

Met Asp Ile Lys Ala Val Ser Pro Ser Pro Ala

1 5 10

act aca gac age act gca ggg act gtc ctg ctg tgt ttt ttt aag gca 577

Thr Thr Asp Ser Thr Ala Gly Thr Val Leu Leu Cys Phe Phe Lys Ala

15 20 25

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Trp Val Leu Gln Lys Gln Leu Leu Ser Cys Thr Pro Lys Val Glu Trp
30 35 40

aag too oto ggt aaa gga gga gga gag agt gtg aag gga atg gca agg 673 Lys Ser Leu Gly Lys Gly Gly Gly Glu Ser Val Lys Gly Met Ala Arg 45 50 55 60 cgg gga ggg aga cag ggc aca ggt gtc ctg gca aca gca gat ggg aaa Arg Gly Gly Arg Gln Gly Thr Gly Val Leu Ala Thr Ala Asp Gly Lys cag gtc tgg cta agg tac cag aag cca aca agt ccc aga aag gtc aag Gln Val Trp Leu Arg Tyr Gln Lys Pro Thr Ser Pro Arg Lys Val Lys 80 90 85 tgactttccc aaggtcacac agcaagttga tggcagagct gggtacagga ctcaga 825 <210> 24 <211> 92 <212> PRT <213> Homo sapiens <400> 24 Met Asp Ile Lys Ala Val Ser Pro Ser Pro Ala Thr Thr Asp Ser 5 15 10 Thr Ala Gly Thr Val Leu Leu Cys Phe Phe Lys Ala Trp Val Leu Gln 20 25 Lys Gln Leu Leu Ser Cys Thr Pro Lys Val Glu Trp Lys Ser Leu Gly Lys Gly Gly Glu Ser Val Lys Gly Met Ala Arg Arg Gly Gly Arg 55 Gln Gly Thr Gly Val Leu Ala Thr Ala Asp Gly Lys Gln Val Trp Leu 75 65 Arg Tyr Gln Lys Pro Thr Ser Pro Arg Lys Val Lys 85 <210> 25 <211> 1099 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (83)..(889) <400> 25

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tac Tyr 155	Gly	ago Ser	ttc Phe	ggc Gly	gtg Val	. Gly	ttg Leu	tto Phe	c tcc e Ser	gtg Val	l Asp	cct Pro	gag Glu	ggaa 1 Glu	gac Asp 170	592
Gl)	g tac y Tyr	c ccg	g cto	acc Thr	· Val	g gct	gad Asp	tat Tyi	t tcc Sei 180	c Gly	e act y Thi	gca Ala	ggo	gac Asp 185	Ser	640

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		-	190		-		3	195			-	_	200			
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дар	1115	205	GLU	ASII	ASII	Суб	210	AIG	FIIC	1 y L	Arg	215	AIG	*rp	11p	
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ıyı	220	MSII	Суб	HIS	1111	225	ASII	Бец	ABII	Gry	230	ıyı	Бец	Arg	OLY	
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Trp	Gln	Tyr	Ser	Leu 255	Lys	Phe	Ser	Glu	Met 260	Lys	Ile	Arg	Pro	Val 265	Arg	
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	Asp															
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cgg	accc	act (	ctcc	agta	gg ga	aggg	geegg	g gc	catc	cctg	aca	cgaa	gct (	cact	gggccg	1049
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770	Dwo	<b>N</b> 1 a		<i>α</i> 1	mb z	2 200	Drea		<b>C</b> 111	Cara	71 ~	Th v		Cor	λνα	
WIG	Pro	35	wrA	GTÀ	1111	vrā	40	ътЯ	GIY	Cys	л±а	45	ULY	nei	Ar 9	
Pro	Arg 50	Asp	Суз	Leu	Asp	Val	Leu	Leu	Ser	Gly	Gln 60	Gln	Asp	Asp	Gly	

Val Tyr Ser Val Phe Pro Thr His Tyr Pro Ala Gly Phe Gln Val Tyr
65 70 75 80

Cys Asp Met Arg Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg Arg 85 90 95

Glu Asp Gly Ser Val Asn Phe Phe Arg Gly Trp Asp Ala Tyr Arg Asp
100 105 110

Gly Phe Gly Arg Leu Thr Gly Glu His Trp Leu Gly Leu Lys Arg Ile 115 120 125

His Ala Leu Thr Thr Gln Ala Ala Tyr Glu Leu His Val Asp Leu Glu 130 135 140

Asp Phe Glu Asn Gly Thr Ala Tyr Ala Arg Tŷr Gly Ser Phe Gly Val 145 150 155 160

Gly Leu Phe Ser Val Asp Pro Glu Glu Asp Gly Tyr Pro Leu Thr Val 165 170 175

Ala Asp Tyr Ser Gly Thr Ala Gly Asp Ser Leu Leu Lys His Ser Gly
180 185 190

Met Arg Phe Thr Thr Lys Asp Arg Asp Ser Asp His Ser Glu Asn Asn 195 200 205

Cys Ala Ala Phe Tyr Arg Gly Ala Trp Trp Tyr Arg Asn Cys His Thr 210 215 220

Ser Asn Leu Asn Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala 225 230 235 240

Asp Gly Val Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys 245 250 255

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		_		-	_	~		_	-	gcg Ala		_				151
				_	_					ccc Pro						199
_			-		_	_	_	_		gtc Val 65			_			247
				_			_			tgt Cys	_	•	~	_	_	295
	-									gag Glu						343
					_					ggc Gly			-			391
~ ~ ~							~			cac His	_	_			_	439
	_									gac Asp 145						487
_										ggc Gly						535
										gct Ala						583

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ggt Gly 215	gcc Ala	tgg Trp	tgg Trp	tac Tyr	cgc Arg 220	aac Asn	tgc Cys	cac His	acg Thr	tcc Ser 225	aac Asn	ctc Leu	aat Asn	gjå aaa	cag Gln 230	727
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			cgg Arg					accg	gtg	cacc	ttgt	cc t	tggc	cctg	c	874
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Arg	j Asp	) Ar	g Gly 20		ı Gly	y Arg	g Pro	2!		n Ly	s Ala	a As _]	p Lei		n Arg	
Ala	a Pro	Ala 3		g Gl	y Th:	r Ar	g Pro		g Gl	у Су	s Ala	a Th		y Se:	r Arg	

- Pro Arg Asp Cys Leu Asp Val Leu Leu Ser Gly Gln Gln Asp Asp Gly 50 55 60
- Val Tyr Ser Val Phe Pro Thr His Tyr Pro Ala Gly Phe Gln Val Tyr
  65 70 75 80
- Cys Asp Met Arg Thr Asp Gly Gly Gly Trp Thr Val Phe Gln Arg Arg 85 90 95
- Glu Asp Gly Ser Val Asn Phe Phe Arg Gly Trp Asp Ala Tyr Arg Asp 100 105 110
- Gly Phe Gly Arg Leu Thr Gly Glu His Trp Leu Gly Leu Lys Arg Ile 115 120 125
- His Ala Leu Thr Thr Gln Ala Ala Tyr Glu Leu His Val Asp Leu Glu 130 135 140
- Asp Phe Glu Asn Gly Thr Ala Tyr Ala Arg Tyr Gly Ser Phe Gly Val 145 150 155 160
- Gly Leu Phe Ala Val Asp Pro Glu Glu Asp Gly His Pro Leu Thr Val 165 170 175
- Ala Asp Tyr Ser Gly Thr Ala Gly Asp Ser Leu Leu Lys His Ser Gly
  180 185 190
- Met Arg Phe Thr Thr Lys Asp Arg Asp Ser Asp His Ser Glu Asn Asn 195 200 205
- Cys Ala Ala Phe Tyr Arg Gly Ala Trp Trp Tyr Arg Asn Cys His Thr 210 215 220
- Ser Asn Leu Asn Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala 225 230 235 240
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												gtt Val					40
1	1	Mali	rne	Цец	5	Beu	110		• • • • • • • • • • • • • • • • • • • •	10					15		
t	cg	gaa	tca	cct	cag	gac	tcc	act	ccc	aat	caa	tta	tat	atc	tgg	ggg	96
5	Ser	Glu	Ser	Pro	Gln	Asp	Ser	Thr		Asn	Gln	Leu	Tyr		Trp	Gly	
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2	Arg	Thr	Lys	Ala	Leu	Val	Phe	Phe	Arg	Ser	Ser	Thr		Asp	Ser	Asp	
	~		35				•	40					45				
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												Asn					
		50					55					60					
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	Ala	Glu	Glu	Leu	Pro	Trp	Glu	Met	Ser	His	Thr	Glu	His	Gln	Ser	Ser	
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																Gly	
	<i>J</i>		115				_	120					125				
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	aaa	ו gca	act	. ggg	aaa Twe	agc	agg Ara	aca Thr	His	Cvs	Thr	· Val	Thr	Ala	Val	tca Ser	132
	БУБ	130		Gry	Dys	DCI	135			-1.		140					
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	145	•				130	,				±	-					
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Arg Thr Lys Ala Leu Val Phe Phe Arg Ser Ser Thr Gly Asp Ser Asp 35 40 45

Ser Thr Ala Arg Ile Lys Lys Leu Ile Asn Gly Asn Ser Met Pro Val 50 55 60

Ala Glu Glu Leu Pro Trp Glu Met Ser His Thr Glu His Gln Ser Ser 65 70, 75 80

Phe Pro Thr Pro Glu Ile Pro His Ser Leu Ala Pro Gly Thr Val Ala 85 90 95

Ile Ser Lys Pro Trp Phe Pro Ala Val Ser Gln Ile $^\prime$  Ala Arg Val Gln 100 105 110

Arg Val Asp Ile Asn Phe Cys Ser Trp Glu Asp Leu Ser Pro Ser Gly
115 120 125

Lys Ala Thr Gly Lys Ser Arg Thr His Cys Thr Val Thr Ala Val Ser 130 135 140

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<210> 33

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31

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